

Dermatology in Greenland

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Below you will be guided through Greenland with its breath-taking scenic viewpoints and learn how dermatology is taken care of in this isolated part of the world. Both the authors have visited and worked there.

Greenland is an enormous country with many contradictions. The geography of the country is vast; the coastline exceeds several thousand kilometres, yet the population is only 57,000. The capital Nuuk has approximately 15,000 inhabitants, and there are 17 small cities scattered along the coast, each with 1000–4000 inhabitants. Fifteen percent of the population lives in small settlements, which are very isolated and hours away from the small cities. A few kilometres from the coast the whole country is covered by a tremendous ice cap, which at the summit is around 3 kilometres thick.

None of the cities are connected by roads and all transportation is by boat or air. Most cities today have runways for ordinary aircraft, but the settlements and a few cities, such as Qaqortoq, can only be reached by helicopter. North of the Arctic Circle the sea is frozen in the winter and access by ship is only possible during the summer months.



Fig. 1. The ice-covered sea at Uummannaq, with groups of resting sledge dogs and car traffic visible on the ice.

The challenges for the Greenland administration are enormous. Greenland is now an autonomous country within the kingdom of Denmark. The Danish government remains in charge only of foreign affairs, security and financial policy, and providing a subsidy of DKr 3.4 billion per year, equivalent to approximately USD 11,300 per Greenlander per year.

Greenland is a fantastically beautiful country and the people are very friendly and hospitable. In the cities people lead modern western lifestyles, but in settlements life is much simpler. However, there is access everywhere to the internet and television.

All cities have small district hospitals staffed by a few doctors, nurses, midwives, social workers, technical assistants and interpreters. In the major district hospitals there are also registrars. It is difficult for Greenland to recruit sufficient doctors and nurses to fill the positions available. Many young Greenlanders who go on to higher education decide to settle abroad instead of returning to Greenland to work.

The country hospital in the capital Nuuk is a multi-speciality hospital, which is also in charge of organization of specialist services to the other cities and settlements. A challenge is the limited level of expertise at each district hospital, which depends on the staff present. This means that patients must often be transferred to the country hospital at Nuuk, or to Rigshospitalet in Copenhagen. The cost of patient transport within Greenland and to Denmark exceeds 100 million Dkr per year.

There are no dermatologists working in Greenland. The Greenland government has a contract with the Department of Dermatology, Bispebjerg Hospital,



Fig. 2. Uummannaq with the impressive Uummannaq mountain behind.

Copenhagen, which supplies tele-dermatology and approximately 6 weeks per year of dermatologist visits to cities in Greenland. Organization of the dermatology service is the responsibility of the country hospital in Nuuk. There are usually three 2-week consultation tours to Greenland per year, distributed around the year and between cities.

The consultant dermatologist's visit is tightly scheduled and the programme planned in advance, therefore most of the patients have chronic or recurrent skin diseases that need specialist consultation and advice, and only a few patients with acute diseases are seen on these tours. In each city the dermatologist works for 1–3 days depending on how many patients are referred to specialist consultation.



Fig. 3. A dog sledge on the frozen sea at Uummannaq.

Consultations take place at the local district hospital with the help of an interpreter who is in charge of the patient programme. The working hours are approximately 8.00–16.00. Many patients understand Danish, but many have difficulty expressing their health problems in Danish and prefer to speak Greenlandic. Approximately 15–20 min are scheduled for each consultation. When required, the dermatologist is provided with assistance from the local nurses and doctors, e.g. in cases of skin biopsy, small operations and allergy tests.

Venereology is well organized in Greenland, with up-to-date plans for diagnosis and treatment, thanks to the work of Dr Ellis From, who worked as a consultant at the country hospital of Nuuk from 1997 to 2002.

The authors recently undertook consultation tours to the northwest (Klaus E. Andersen) and southwest (Tonny Karlsmark) areas of Greenland. The tours were organized by the local authorities in Nuuk and agreed with the consultants.

In March–April 2009, Klaus E. Andersen visited all the cities on the west coast north of the Arctic Circle, starting at Qaqertarsuaq (Godhavn) on Disco Island, continuing to Qasigiannuit (Christianshåb), Upernavik, Uummaanaq (Umanaq), Ilulissat (Jacobshavn), Aasiaat (Egedesminde) and Sisimiut (Holsteinsborg), while Tonny Karlsmark visited the southwest: Nanortalik, Qaqortoq (Julianehåb), Paamiut (Frederikshåb), Nuuk and Manitsoq (Sukkertoppen).



Fig. 4. Local fishermen catching Greenland halibut with long-line fishing through the ice at Qasigiannuit.



Fig. 5. Ilulissat from the mountain behind the town.

The weather in both the north and the south was good during the 16-day tours, with no flight delays due to bad weather. This is rather unusual in Greenland when you have 16 take-offs and landings over such a short time period.

The natural beauty of Greenland is breathtaking and overwhelming. As can be seen in the photographs (Figs 1–6), the ice-covered sea, the mountains, the fishermen at work, the colourful houses in the cities, and the dog sledges are all impressive sights.

During the consultation tours approximately 450 patients were seen in total, with 15–30 patients per day. The electronic patient records were accessible at each clinic. The dermato-



Fig. 6. An iceberg outside Ilulissat.

logy consultation was dictated and was written up by a local secretary, and copies were retrieved for the file at the Department of Dermatology, Bispebjerg Hospital. The spectrum of dermatological diagnoses was similar to that seen at a hospital outpatient clinic in Denmark. Severe eczema, both endogenous and exogenous, is common. Atopic dermatitis, allergic contact dermatitis and nummular eczema are all common diseases. Skin prick tests with a series of basic inhalant allergens and latex allergen were performed, and epicutaneous tests with the TRUE® test panels were used for diagnosis. Due to the short stay of the dermatologist, instruction and assistance from local nurses and doctors were a prerequisite for proper performance and interpretation, and subsequent follow-up by e-mail was required to conclude the consultation.

Few skin tumours were seen, few melanocytic naevi, one basal cell carcinoma of the nose, one squamous cell carcinoma of the penis, and one case of Kaposi's sarcoma. Surprisingly, three cases of severe polymorphic light eruption were seen. Some rare skin disorders, such as cutaneous pigmentary mosaicism and unilateral lichen planus, were also registered. Skin biopsies were sent to the Department of Pathology, Rigshospitalet, Copenhagen.

A particular challenge is the provision of information and instruction to patients and local healthcare staff to assure optimal treatment and long-term follow-up. As there are no pharmacies in Greenland, drugs for each patient are dispensed free of charge by the local district hospitals. The list of drugs kept in stock is limited and prescription of other drugs is possible but should be restricted. However, for dermatological diseases the supply of special drugs to specific patients was often needed. Skin-care products were available for the patients to purchase at local shops.

Between dermatology consultation visits the district hospital must rely on the tele-dermatology service provided by Bispebjerg Hospital. In selected cases, patients are transferred to Denmark for diagnosis and treatment. In 2008, 34 outpatients from Greenland and a total of 70 bed days were registered in the department. An interpreter from Rigshospitalet is always available for the Greenlandic patients, even if patients are referred at night. On discharge, patients are referred to "Det grønlandske Patienthjem", in Brønshøj, where they can stay whilst undergoing outpatient treatment, and where they can be in contact with other Greenlandic-speaking people.